Attorney's Docket No.: 07419-029001

#15

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Gordon et al.
Serial No. : 09/484,577
Filed : January 18, 2000
Art Unit : 1644
Examiner : J. Roark
Title : NOVEL GENES AND POLYPEPTIDES FOR THE DIAGNOSIS OF GIANT CELL ARTERITIS

Commissioner for Patents
Washington, D.C. 20231

DECLARATION UNDER 37 C.F.R. § 1.132

Sir:

1. I, Lynn Gordon, M.D., having an address at 100 Stein Plaza, UCLA Center for the Health Sciences, Los Angeles, California 90095, am one of the inventors of the above-referenced United States patent application serial no. 09/484,577. I am a professor of Ophthalmology, and am an expert in the general fields of neuro-ophthalmology and molecular biology. I was considered an expert in these fields in 2000 at the time of the invention. A copy of my resume is attached.

2. I have read the specification and the file history, including the present office action. I understand the issues presented by the Patent Office in the Office Action mailed September 20, 2001, regarding the pending claims of the application (referred to hereinafter as "the invention").

3. It is my understanding that the Patent Office has requested evidence supporting the utility of nucleic acid-based detection approaches as diagnostic assays. It appears that the Patent Office does not recognize the utility of nucleic acids that are homologous to SEQ ID NO:3. In addition, the Patent Office seeks a credible utility for a PCR primer pair that can amplify nucleic acids that are homologous to SEQ ID NO:3, even were PCR amplification of SEQ ID NO:3 itself shown to be diagnostic.

4. In one aspect, the present invention concerns nucleic acids that can be used to diagnose Giant Cell Arteritis (GCA). The use of nucleic acids for detecting

and diagnosing disease is well known in the art. For example, such assays have been patented in U.S. Patent Nos. 5,466,577; 5,464,743; 5,455,169; 5,324,632; and described in publications such as Zhong *et al.* (2001) Transfusion Vol. 41(8):1001-7; Evertsz *et al.* (2001) BioTechniques Vol. 31(5):1182-1186; Feldman *et al.* (2001) Acta Cytol, Vol. 45(6):985-9; Dabil *et al.* (2001) Arch Ophthalmol. Vol. 119(9):1315-22.

5. As an example, one method for diagnosing diseases or infections, for example, GCA, is to mix a sample containing nucleic acids with probes made from target nucleic acids, under hybridizing conditions. If, in the sample, the probes bind to nucleic acids associated with the disease, *i.e.*, target nucleic acid, then the sample, and consequently the subject from which the sample was derived, is positive for the disease.

6. It is further known in the art that nucleic acids with less than 100% identity to the target nucleic acid can also be used as probes to hybridize to target nucleic acids. For example, the references Zhong *et al.* (2001) Transfusion Vol. 41(8):1001-7 and Evertsz *et al.* (2001) BioTechniques Vol. 31(5):1182-1186 teach that identities as low about 60% can be used to hybridize to target nucleic acids. Thus, nucleic acids having at least 75, 85, and 95% identity to SEQ ID NO:3 would be useful in the practice of the invention. Moreover, primer pairs that can amplify these homologous strands are also useful in the practice of the invention.

7. Exemplary references such as Feldman *et al.* (2001) Acta Cytol, Vol. 45(6):985-9 and Dabil *et al.* (2001) Arch Ophthalmol. Vol. 119(9):1315-22 teach the use nucleic acids and PCR primer pairs in the diagnosis of disease.

8. In further support of the use of nucleic acids and PCR primer pairs in the diagnosis of disease, my laboratory conducted a PCR study for GCA that included the use of SEQ ID NO:3 (lane labeled 1b), the results of which are attached.

GCA positive arterial specimens were obtained from remnants of biopsy specimens that were no longer required by the pathologist and which were diagnosed by a pathologist as being consistent with GCA. GCA negative arterial specimens were

obtained from remnants of biopsy specimens that were no longer required by the pathologist and which were diagnosed by a pathologist as not being consistent with GCA. Cytochrome p450 was used as a positive control for DNA amplification. Primer pairs derived from SEQ ID NO:3 were GTCGGCTCGTGAAGTGG 5' and ACGATGTCGATCCTGCC 3', and CTCTCCAGCCTCTCACCGAGGAT 5' and AATAACGCAGCCGCATGACGCCTGG 3'. DNA was extracted from the arterial samples using a Quiagen DNA mini-kit using the manufacturer's suggestions. In brief, 10 sections of 5 micron thickness were used to obtain each DNA sample. The quantity of extracted DNA was not determined. One percent of the final specimen was used in each PCR reaction. Adequacy of DNA material for use in PCR was determined by appropriate amplification of a housekeeping gene fragment of cytochrome p450.

PCR cycling conditions were as follows: The reaction tubes containing the DNA sample, primer pairs and PCR reagents were heated at 94°C for 3 minutes. Then they were taken out and PCR beads were added. The tubes were returned to the PCR cycler. 35 cycles were run at the following temperatures, 94°C for 30 sec. to denature the DNA, 60°C for 30 sec. to anneal the DNA, and then 72°C for 1 minute to extend the DNA from its primer. After the 35 cycles, the tubes were held at 72°C for 7 mins., and then cooled to 4°C, until the tubes were removed from the cycler.

The PCR products were run on a 1.5 % agarose gel and stained with ethidium bromide. As expected, in the lanes labeled 1b, a product is amplified from the arterial sample that is positive for GCA and no product is amplified for the GCA negative sample. Thus, primer pairs prepared from SEQ ID NO:3 can be used to detect for the presence of GCA associated nucleic acids, the presence of which is indicative of GCA disease.

9. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

Attorney's Docket No.: 07419-029001

Respectfully Submitted

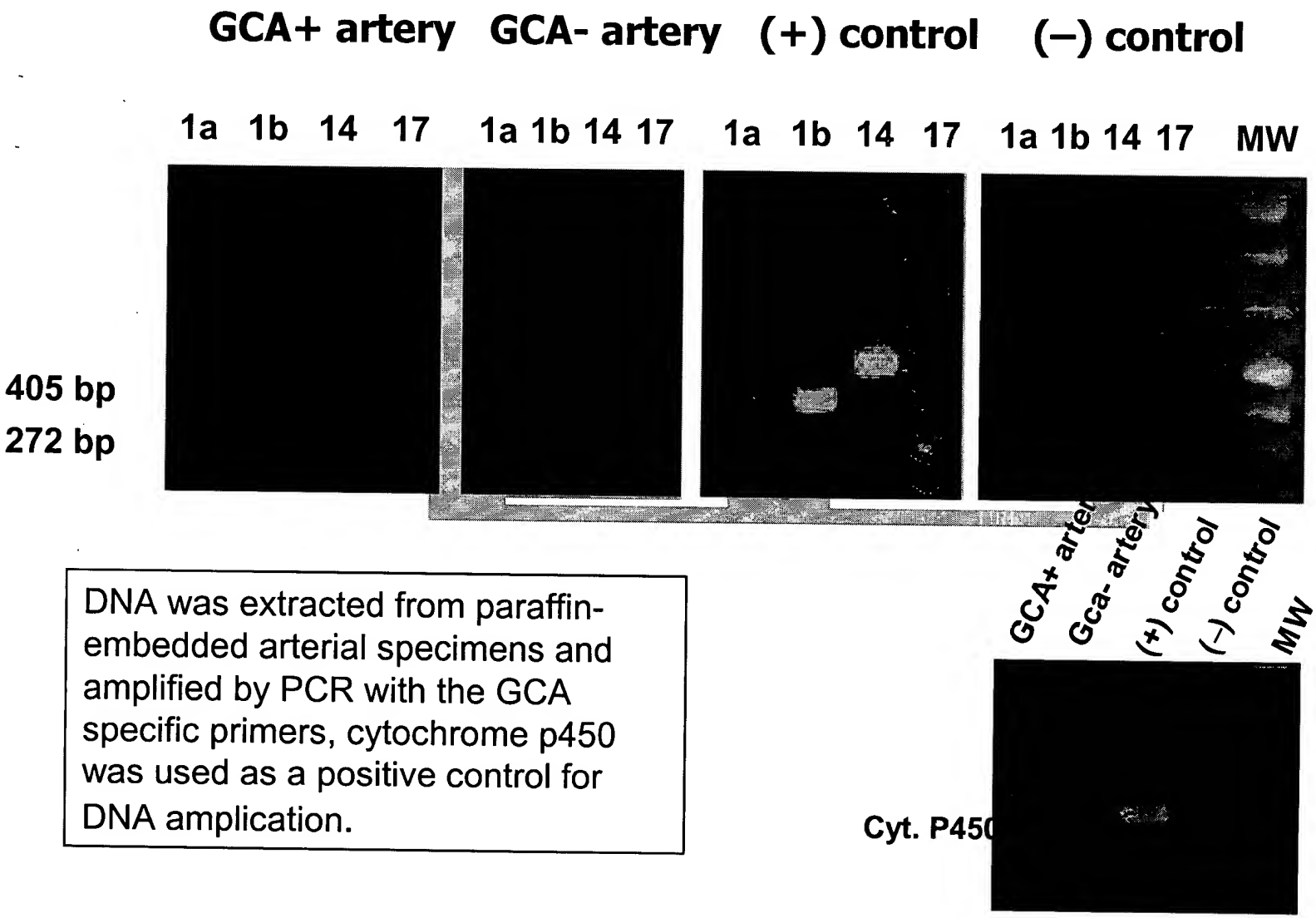
Date: 3/19/02

Lynn Gordon, M.D.

10171394.doc

EXHIBIT A

PCR Evidence for Lesional Presence of GCA1b and GCA 17 Sequences



DNA was extracted from paraffin-embedded arterial specimens and amplified by PCR with the GCA specific primers, cytochrome p450 was used as a positive control for DNA amplication.

EXHIBIT B

10171860.doc

LYNN KATHRYN GORDON

Curriculum Vitae

Biographical and Personal Information

Date and Place of Birth:	July 23, 1954; Cleveland, Ohio
Marital Status:	married
Children:	Nathaniel (1983); Ethan (1987); Adam (1992)

Position

Assistant Professor, Department of Ophthalmology, Jules Stein Eye Institute, University of California at Los Angeles (UCLA) Center for the Health Sciences

Chief, Ophthalmology Section, Department of Surgery, Greater Los Angeles Veterans Affairs Healthcare System

Academic History

1972-1975	B.S., Stanford University, Stanford, CA.
1977-1981	Ph.D. Harvard University (Experimental Pathology), Graduate School of Arts and Sciences, Cambridge, MA; "Novel Approaches to the Study of DNA Damage and Repair: The Ultraviolet Light Example", Thesis Advisor: William A. Haseltine, Ph.D.
1980-1984	M.D., Harvard Medical School, Boston, MA

Fellowships and Residencies

1978-1980	Teaching Fellow, Graduate School of Arts and Sciences, Harvard University, Cambridge, MA
1984-1985	Intern in Internal Medicine, Mount Auburn Hospital, Cambridge, MA
1984-1985	Clinical Fellow, Harvard Medical School
1985-1988	Resident in Ophthalmology, Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, CA
1988-1989	Fellow, Neuro-Ophthalmology, Jules Stein Eye Institute, UCLA School of Medicine, Los Angeles, CA

Academic Appointments

7/1/2000-present	Assistant Professor, Department of Ophthalmology, UCLA School of Medicine
1999-present	Chief, Ophthalmology Section, VA Greater Los Angeles Healthcare System
1995-2000	Assistant Research Ophthalmologist, Department of Ophthalmology, UCLA School of Medicine
1993-1998	Associate Chief, Ophthalmology Section, West Los Angeles VA Hospital
1992-2000	Clinical Assistant Professor of Ophthalmology Jules Stein Eye Institute, UCLA School of Medicine
1989-1992	Clinical Instructor of Ophthalmology Jules Stein Eye Institute, UCLA School of Medicine

Awards and Honors

1975:	Stanford University: Graduation with University Distinction (School of Humanities and Sciences); Departmental Honors in Biological Sciences
1988-1989	Heed Ophthalmic Fellowship
1988-1989	Francis Howard Goldwyn Fellowship. UCLA
1989	JSEI Special Research Award
2000-2001.	UCLA Academic Senate Council on Research. Recipient of the Academic Senate Seed-Funding and Research Enhancement Initiatives Award.

Research Grants - Inactive

Stein-Oppenheimer Endowment Award. UCLA School of Medicine 10/95-3/97. "Characterization of a marker antibody and its use in identifying candidate antigens for ocular inflammatory disease".

NIH K08 EY00360-01A1. 3/97 – 8/01. "Immune mechanisms of ocular inflammatory disease".

Research Grants – Active

NIH (UCLA Multipurpose Arthritis and Musculoskeletal Disease Center). Development and feasibility study: P60 AR36824-13. Grant PI: Bevra Hahn, M.D., Chair of Rheumatology, UCLA 7/1/00-7/1/01."Giant Cell Arteritis (GCA): Identification and Characterization of Lesional Microbial Sequences". Project PI: Lynn K. Gordon, M.D., Ph.D. Direct costs:

Council on Research of the Academic Senate at UCLA. PI: Lynn K. Gordon, M.D., Ph.D. 2000-2001 Assistant Professor Initiative. "Development of a Rodent Uveitis Model". Direct costs:

Council on Research of the Academic Senate at UCLA. PI: Lynn K. Gordon, M.D., Ph.D. 2001-2002 Award. "Beta B1 Crystallin- role in ocular inflammatory disease". Direct costs:

NIH EY13708. PI: Lynn K. Gordon, M.D., Ph.D, 9/1/01-8/31/04. "Beta-B1 Crystallin – a New Candidate Uveitis Autoantigen". Direct costs:

Research Grants - pending

NIH R01 submission 6/01. PI: J. Braun, M.D., Ph.D. "Role of EMP2 in CTL Targeting and Tumor Immuity"

Professional Licensure

Diplomat, National Board of Medical Examiners, 1985, #293182

Diplomat, American Board of Ophthalmology, 1990

Medical License: California G057153

Professional Memberships

1995- present	Association of Veterans Affairs Ophthalmologists
1989-1998	American Medical Association
1987- present	American Academy of Ophthalmology- Fellow
1989-present	Jules Stein Eye Institute - Department of Ophthalmology Association
1990-present	Los Angeles Society of Ophthalmology
1990-present	Society of Heed Fellows
1994-present	NANOS (North American Neuro-ophthalmology Society)
1996-present	Women in Ophthalmology
1998-present	International Ocular Inflammation Society
2000-2001	Los Angeles County Medical Association
2001-present	Clinical Immunology Society
2001-present	American Uveitis Society

Committees and Executive Positions

1996-1999	Secretary-Treasurer. Association of Veterans Affairs Ophthalmologists
1997-1998	Vice-President. Jules Stein Eye Insitute Department of Ophthalmology Association
1998-2000	President. Jules Stein Eye Insitute Department of Ophthalmology Association
2000-2001	UCLA Councilor, Los Angeles County Medical Association
2000-present	Media Spokesperson, American Academy of Ophthalmology (representative of the North American Neuro-ophthalmology Society)
2000-present	Board Member, Women In Ophthalmology
2000-present	Membership Committee, North American Neuro-ophthalmology Society
2001-present	Research Committee, North American Neuro-ophthalmology Society
2001-2002	Planning Committee, FOCIS (Federation of Clinical Immunology Societies Annual Meeting) for June 2002.

UCLA Committee Assignments

1996	Search Committee, Chief of Ophthalmology, Sepulveda VA Medical Center
1998-2001	Ophthalmology Residents and Fellows Day – Department of Ophthalmology Association Clinical Meeting Subcommittee
1999	Search Committee, Glaucoma faculty recruitment
1999-2000	Clinical Faculty Appointment Subcommittee of the Department of Ophthalmology Clinical Committee
1999-2000	Clinical Research Committee of the Jules Stein Eye Institute, Department of Ophthalmology
1999-2000	Department of Ophthalmology Medical Student, Graduate Student, and Primary Physician Education Committee
1999-present	Department of Ophthalmology Resident Selection Committee
2000-present	Medical Scientist College Advisory Council, UCLA Medical School
2001	Facilitator - annual MAA Conference on Career Choices in Medicine at UCLA 1/01
2001-2004	Representative of the Department of Ophthalmology in the Legislative Assembly of the Academic Senate of UCLA

Community Organizations

1995-1996 Day School Board of Directors, Valley Beth Shalom

2000-present Ethical Action Committee, Valley Beth Shalom

Manuscript Reviewing

American Journal of Ophthalmology
Archives of Ophthalmology
Journal of the American Association for Pediatric Ophthalmology and Strabismus
Thyroid

UCLA Teaching

2000 Lecturer, Neuroscience M203, "Visual system clinical exam"

2000 Small Group Instructor – M201 Clinical Fundamental Course – Clinical Ophthalmology

2001 Lecturer - Neuroscience M203, "Visual system clinical exam"

2001 Instructor - MS02 Year-Long Seminar Series/Medical Scientist College

Invited Presentations – Local

1992 "Inflammatory Orbital Disease". Jules Stein Eye Institute. Ultrasonography Course.

"Compressive Optic Neuropathy". Combined Neuro-Ophthalmology Meeting. Jules Stein Eye Institute and Kaiser Permanente, Long Beach.

1993 "Orbital Imaging". Jules Stein Eye Institute. Orbital Diseases Course.

"Combinatorial phage display libraries in autoimmune uveitis". Jules Stein Eye Institute Annual Research Symposium

1995 "Orbital Inflammatory Disease". Jules Stein Eye Institute. Ultrasonography Course

"Rationale for Optic Nerve Sheath Decompression in NAION and CRVO". Jules Stein Eye Institute, Annual Seminar: Glaucoma and Neuro-Ophthalmology

1997 "Optic Nerve Sheath Decompression: Current Indications and Technique" Jules Stein Eye Institute, Annual Seminar: Orbital and Ophthalmic Plastic Surgery

"Orbital Tumors". Jules Stein Eye Institute. Neuroimaging in Ophthalmology

"Pseudotumor Cerebri". Southern California Permanente Medical Group, Ophthalmology Symposium, Costa Mesa.

"Ophthalmic Manifestations of Myasthenia Gravis". Southern California Permanente Medical Group, Ophthalmology Symposium, Costa Mesa.

2001 "Optic Nerve Abnormalities". Allergan Clinical Conference. Irvine, California.

"Temporal Arteritis – Emerging Insights". Jules Stein Eye Institute Annual Seminar.

Invited Presentations – National

1991 "Diabetic Papillopathy". California Association of Ophthalmology Annual Meeting, San Diego.

2000 "Immune Neuro-ophthalmology". "Headache Masqueraders". "The Bulging Eye". Guest Lecturer – "9th Biennial University of Wisconsin Clinical Neuro-Ophthalmology Symposium". University of Wisconsin-Madison Medical School, Madison, Wisconsin.

"New approaches to old diseases: The search for a microbial pathogen in giant cell arteritis". Aspen Summer Symposium, Women in Opthhalmology. Aspen, Colorado.

"New methods for identifying novel etiologies of inflammatory glaucomas". Glaucoma Foundation's 7th Annual Glaucoma Think Tank. New York, New York.

2001 "New approaches to old diseases: molecular clues of microbial pathogens in inflammatory vasculitis". American Uveitis Society Winter Meeting. Vail, Colorado.

"Differential Diagnosis of the Big Cup". North American Neuro-Ophthalmology Symposium, Palm Desert, California.

"Giant Cell Arteritis: Emerging concepts in pathogenesis". "Neuro-ophthalmic orbital disease". Neuro-ophthalmology Clinical Conference Lecture Series. Visiting Professor. University of Iowa Heath Care. Department of Ophthalmology and Visual Sciences. 10/26/01.

"Giant Cell Arteritis: Emerging concepts". Invited lecture at AAO Annual Meeting Symposium "Predilection of Inflammatory Disease in Women and Children: The Gender Gap". New Orleans, LA.

Instructor, "Visual Fields in Neuro-ophthalmology" – Lab course. AAO Annual Meeting, New Orleans, LA.

Presentations at National and International Meedtings

1988 "Chiasmal Apoplexy Diagnosed by Magnetic Resonance Imaging". International Neuro-Ophthalmology Society, Vancouver.

"Antibodies in Patients with HLA-B27 Associated Acute Recurrent Iridocyclitis". Association for Research in Vision and Ophthalmology (ARVO), Sarasota, FL.

1998 "Identification of ciliary body antigens recognized by the marker antibody, pANCA." First Combined International Symposium on Ocular Immunology and Inflammation, 1998, Amsterdam, The Netherlands.

1999 "Molecular approaches to identify candidate pathogens in giant cell arteritis". North American Neuro-Ophthalmology Symposium, Snowmass, Colorado.

"Identification of candidate microbial sequences associated with inflammatory lesions of giant cell arteritis (GCA)". Association for Research in Vision and Ophthalmology, Annual Meeting (ARVO), Fort Lauderdale, FL

2000 "Giant Cell Arteritis (GCA) – Characterization of candidate microbial sequences and evidence of immunologic relevance. North American Neuro-Ophthalmology Symposium, Mt. Tremblant, Canada.

2001 "Beta B1 Crystallin is a Candidate Antigenic Target in Uveitis Association for Research in Vision and Ophthalmology, Annual Meeting (ARVO), Fort Lauderdale, FL

Recent Abstracts (1996-present)

1. Eggena, MP, Targan, SR, Vidrich, A, Clemens, DF, Iwanczyk, L, Gordon, LK, Braun, J. Characterization of the ulcerative colitis specific pANCA target antigen. DDW/AGA Annual Meeting, San Francisco, CA, 1996.

2. Eggena, MP, Targan, SR, Vidrich, A, Clemens, DF, Iwanczyk, L, Gordon, LK, Braun, J. Identification of histone H2 as the ulcerative colitis specific pANCA target antigen. AAI/ASIP Annual Meeting. New Orleans, LA, 1996.

3. Eggena, MP, Targan, SR, Gordon, LK, Braun, J. Histone H1, a candidate antigen for the ulcerative colitis specific pANCA. Clinical Immunology Society Annual Meeting, New Orleans, LA. 1996.

4. Eggena, MP, Parseghian, M, Hamkalo, B, Cohavy, O, Targan, SR, Gordon, LK, Braun, J. Histone H1 is the pANCA antigen in ulcerative colitis. International ANCA meeting, Rochester, MN. 1996.

5. Gordon, LK,Iwanczyk, L, Eggena, MP, Weisz, JM, Holland, GN, Braun, J. Significance of pANCA Autoantibodies in Uveitis Patients.[ARVO Abst]. Investigative Ophthalmology and Visual Science. 1996; 37(3): S366. Abstract nr 1690.

6. M Chodos, MP Eggena, SR Targan, J Braun, LK Gordon. Identification of a mucosal target cell expressing the cognate antigen of the ulcerative colitis marker antibody, pANCA. AAAAI/AAI/CIS Joint Meeting, San Francisco. 1997.

7. Gordon, LK, Eggena, MP, Targan, SR, Braun, J. Expression of the cognate antigen of the ulcerative colitis marker antibody in ocular and extraocular tissues. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 1997; 38(4): S525. Abstract nr 2429.

8. Gordon, LK, Eggena, MP, Targan, SR, Braun. Tissue expression of antigens recognized by the ulcerative colitis marker antibody, pANCA. American Gastroenterologic Association, Washington, DC. 1997.

9. Cohavy, O, Eggena, MP, Parseghian, M, Hamkalo, B, Targan, SR, Gordon, LK, Braun, J. Histone H1, a candidate pANCA antigen in ulcerative colitis. American Gastroenterologic Association, Washington, DC. 1997.

10. Gordon, LK, Braun, J. Identification of ocular antigens recognized by a uveitis subset marker antibody. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 1998; 39 (4): S362. Abstract nr 1686.

11. Gordon, LK, M.Goldman, H.L. Sandusky, T.Goodglick, J. Braun, L.Goodglick. Molecular Approaches to Identify Candidate Pathogens in Giant Cell Arteritis. North American Neuro-Ophthalmology Association, Snowmass, CA, 1999.

12. Cohavy, O, Targan, SR, Gordon, LK, Braun, J. Molecular mimicry? Molecular characteristics of E. coli and Bacteroides proteins that are reactive with pANCA monoclonal antibodies. AGA conference, Orlando, FL, 1999.

13. Gordon, LK, Goldman, M, Sandusky, HL, Goodglick, T, Braun, J, Goodglick, L. Identification of candidate microbial sequences in inflammatory lesions of giant cell arteritis. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 1999; 40(4): S204. Abstract nr 1074.

14. Sandusky, HL, Cilluffo, M, Gordon, LK. Species conservation of ocular antigens recognized by the marker antibody, pANCA. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 1999; 40(4): S556. Abstract nr 2934.

15. Gordon, LK, Goldman, M, Sandusky, HL, Ziv, N, and Goodglick, L. Characterization of Candidate Microbial Sequences from Lesions of Giant Cell Arteritis (GCA). Keystone Symposium: Pathogen Discovery, from Molecular Biology to Disease, Taos, New Mexico, 2000.

16. Gordon, LK, Goldman, M, Sandusky, HL, Ziv, N, Hoffman, G, Goodglick, L. Immunologic Evidence Associating Candidate Microbial Sequences with Giant Cell Arteritis. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 2000; 41(4): S155. Abstract 801.

17. Giese, MJ, Fardin, B, Rayner, SA, Rozengurt, N, Mondino, BJ, Gordon, LK. Mitigation of Neutrophil Infiltration in Active, Early *Staphlococcus aureus* Experimental Endophthalmitis. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 2000; 41(4): S156. Abstract 805.

18. Sandusky, HL, Sutton, C, Rosenbaum, JT, Holland, GN, Braun, J, Gordon, LK. Characterization of Antigens Detected by a Uveitis Marker Antibody. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 2000; 41(4): S368. Abstract 1938.

19. Gordon, LK, M.Goldman, H.L. Sandusky, P. Kanchanastit, N. Ziv, G. Hoffman, L.Goodglick. GIANT CELL ARTERITIS (GCA) – Characterization of candidate microbial sequences and evidence of immunologic relevance. [AUS Abst.] Arthritis and Rheumatism. 2000; 43(9 supplement): S388. Abstract 1928.

20. Giese, MJ, Rayner, SA, Summer, HL, Mondino, BJ, Gordon, LK. Role of Neutrophils in Early Experimental *Staphylococcus aureus* Endophthalmitis. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 2001; 42(4): S251. Abstract 1354.

21. Gordon, LK, Lampi, K, Cilluffo, M, Stempel, D, Sandusky, HL, Horwitz, J, Braun, J, Goodglick, L. Beta B1 Crystallin is a Candidate Antigenic Target in Uveitis. [ARVO Abst]. Investigative Ophthalmology and Visual Science. 2001; 42(4): S303. Abstract 1938.

22. Goodglick, L, Goldman, M., Sandusky, H., Kanchanastit, P., Ziv, N., Gordon, L.K. Characterization of candidate microbial sequences in giant cell arteritis. Clinical Immunology. 2001. 99(1): 147. Absract 140.

Publications (Peer Reviewed)

1. Haseltine, W.A., **Gordon, L.K.**, Linden, C.P., Graftstrom, R.H., Shaper, N.L., and Grossman, L.: Cleavage of Pyrimidine Dimers in Specific DNA Sequences by a Pyrimidine Dimer DNA-Glycosylase of M. luteus. Nature 285:634-641. 1980.

2. **Gordon, L.K.**, and Haseltine, W.A.: Comparison of the Cleavage of Pyrimidine Dimers by the Bacteriophage T4 and M. luteus UV-Specific Endonucleases. J. Biol. Chem. 255:12047-12050. 1980.

3. **Gordon, L.K.**, and Haseltine, W.A.: Early Steps of Excision Repair of Cyclobutane Pyrimidine Dimers by the Micrococcus luteus Endonuclease: A Three Step Incision Model. J. Biol. Chem. 256:6608-6616. 1981.

4. Lippke, J.A., **Gordon, L.K.**, Brash, D.E., and Haseltine, W.A.: Distribution of Ultraviolet Light Induced Damage in a Defined Sequence of Human DNA: Detection of Alkaline Sensitive Lesions at Pyrimidine-Nucleoside-Cytidine Sequences. Proc. Natl. Acad. Sci. USA. 78:3388-3392. 1981.

5. Royer-Pokra, B., **Gordon, L.K.**, and Haseltine, W.A.: Use of Exonuclease III to Determine the Site of Stable Lesions in Defined Sequences of DNA: The Cyclobutane Pyrimidine Dimer and cis and trans Dichloradiamine Platinum II examples. Nucleic Acids Research 9:4595-4607. 1981.

6. **Gordon, L.K.**, and Haseltine, W.A.: Quantification of Cyclobutane Pyrimidine Dimer Formation in Double and Single Stranded DNA Fragments of Defined Sequences. Radiation Research 89:99-112. 1982.

7. Haseltine, W.A., Lippke, H.A., **Gordon, L.K.**, and Brash, D.E.: Detection of Alkaline Sensitive Lesions Induced by Ultraviolet Light at Pyrimidine-Cytosine Sequences in DNA. in Mechanisms of Chemical Carcinogenesis. eds. Harris, C.C., and Cerutti, P.A. 1982. pgs. 363-368.

8. Haseltine, W.A., **Gordon, L.K.**, Linden, C., Lippke, J., Brash, D., Lo, K.M., and Royer-Pokora, B.: New Approaches to DNA Damage and Repair: The Ultraviolet Light Example. Basic Life Sciences. 20:315-322. 1982.

9. Berberian, L.S., Valles-Ayoub, Y., King, L., **Gordon, L.K.**, Braun, J. Expression of a novel autoantibody defined by the VH3-15 gene in inflammatory bowel disease and *Campylobacter jejuni* enterocolitis. 1994. J. Immunol. 153:3756-3763.

10. Glasgow, BJ, Goldberg, RA, **Gordon, LK**, Krauss, HR, Layfield, LJ. 1995. Fine Needle Aspiration of Orbital Masses. Ophthalmol. Clin. N.A. 8: 73-82.

11. Eggena, M., Targan, S.R., Iwanczyk, L., Vidrich, A., **Gordon, L.K.**, Braun, J. 1996. Phage Display Cloning and Characterization of an Immunogenetic Marker (Perinuclear Anti-Neutrophil Cytoplasmic Antibody) in Ulcerative Colitis. J. Immunol. 156:4005-4011.

12. **Gordon, L.K.**, Eggena, M., Holland, G.N., Weisz, J.M., Braun, J. 1998. pANCA antibodies in patients with anterior uveitis: identification of a marker antibody usually associated with ulcerative colitis. J. Clin Immunol. 18:264-271.

13. **Gordon, L.K.**, Eggena, M., Targan, S.R., Braun, J. 1999. The marker antibody pANCA defines ocular antigens in ciliary body and retinal ganglion cells. Invest. Ophthal. Vis. Sci. 40:1250-1255.

14. Eggena, M., Cohavy, O., Parseghian, M.H., Hamkalo, B.A., Clemens, D., Targan, S.R., **Gordon, L.K.**, Braun, J. 2000. Identification of histone H1 as a cognate antigen of the ulcerative colitis-associated marker antibody pANCA. J. Autoimmunity. 14:83-97.

17. **Gordon, L.K.**, Eggena, M., Targan, S.R., Braun, J. 2000. Identification of a mast cell and neuroendocrine cytoplasmic antigen(s) detected by the pANCA marker antibody in ulcerative colitis. 2000. Clin. Immun.. 94:42-50.

18. Cohavy, O., Bruckner, D., Eggena, M.E., Targan, S.R., **Gordon, L.K.**, Braun, J. 2000. Colonic bacteria express an ulcerative colitis pANCA-related protein epitope. Infect. Immun. 68: 1542-1548.

19. Sandusky, S., Cilluffo, M., Braun, J., and **Gordon, L.K.** 2001. Ocular pANCA antigens are expressed in nonpigmented ciliary body epithelium, and are conserved in multiple mammalian species. Ocular Immun. and Inflam. 9: 25-34.

20. Wei, B., Dalwadi, H., **Gordon, L.K.**, Landers, C., Bruckner, D., Targan, S.R., Braun, J. Molecular cloning of a *Bacteroides caccae* TonB-linked outer membrane protein associated with inflammatory bowel disease. 2001. Infect. Immun., 69:6044-6054.

21. Stempel, D, Sandusky, H, Lampi, K, Cilluffo, M, Horwitz, J, Braun, J, Goodglick, L, and **Gordon, LK**. Beta B1 Crystallin – Identification of a Candidate Ciliary Body Uveitis Antigen. 2001. Invest. Ophthal. Vis. Sci. submitted.

22. Giese, MJ, Rayner, SA, Fardin, B, Sumner, HA, Rozengurt, N, Mondino BJ, **Gordon, LK**. Mitigation of Neutrophil Infiltration in a Rat Model of Active, Early Staphylococcus aureus Endophthalmitis. 2001. Inf. Immun. In preparation

Publications (Case Reports, Invited Papers, and Reviews)

1. Hofbauer, J.D., **Gordon, L.K.**, Palmer, J. Acute orbital cellulitis after peribulbar injection. Am. J. Ophthalmol. 1994. 118: 391-392.

2. Braun, J., Valles-Ayoub, Y., Berberian, L., Eggena, M., **Gordon, L.K.**, Targan, S.R. On the pathogenesis trail: What marker B cell clones tell us about IBD. 1994. in Inflammatory Bowel Disease: Basic Research, Clinical Implications, and Trends in Therapy. ed. Sutherland, LR, Collins, SM, Martin, F, McLeod, R, Targan, SR, Wallace, JL, Williams, CN. Kluver Academic Publishing, Dordrecht, The Netherlands. pgs. 96-103.

3. **Gordon, L.K.**, Levin, L. Giant Cell Arteritis: Raising the Curtain. JAMA. 1998. 280: 385-386.

4. Levin, L., **Gordon, L.K.**. Retinal Ganglion Cell Disorders – Types and Treatments. Progress in Retinal and Eye Research. 2002. In press

5. **Gordon, L.K.** Clinical Approach to the Red Eye. Family Practice Recertification. 2002. in press.

Publications (Books and Chapters)

1. **Gordon, L.K.**, Ph.D. Dissertation: Novel Approaches to the Study of DNA Damage and Repair: The Ultraviolet Light Example. 1981. Harvard University.

2. **Gordon, L.K.**, Goldberg, R.A., Krauss, H.K. Orbital Inflammatory Disease. 1996, in Ocular Infection and Immunity eds. Pepose, JS, Holland, GN, Wilhelmus, KR. Mosby Yearbook Inc. St. Louis. pgs 609-626.

3. **Gordon, L.K.** Neuro-ophthalmic manifestations of cerebrovascular disease. in Managing Ischemic Stroke: A Clinical Approach. 2000 Ed, Stanley N. Cohen. The McGraw-Hill Companies, Health Professions Division, New York.

4. Braun, J., Cohavy, O. Dalwadi, H., Eggena, M.E., Huang, T., Sutton, C.L., **Gordon, L.**, Wei, B. Antibodies in the exploration of IBD pathogenesis and disease stratification. Inflammatory Bowel Disease: From Bench to Bedside (2nd edition, F. Shanahan, ed.). 2001, in press.

5. **Gordon, L.K.** Proptosis. In *Neuro-ophthalmology: The Essentials* 2002. Ed, Levin, LA, Arnold, AA.Thieme Medical Publishers, Inc. New York. In press.